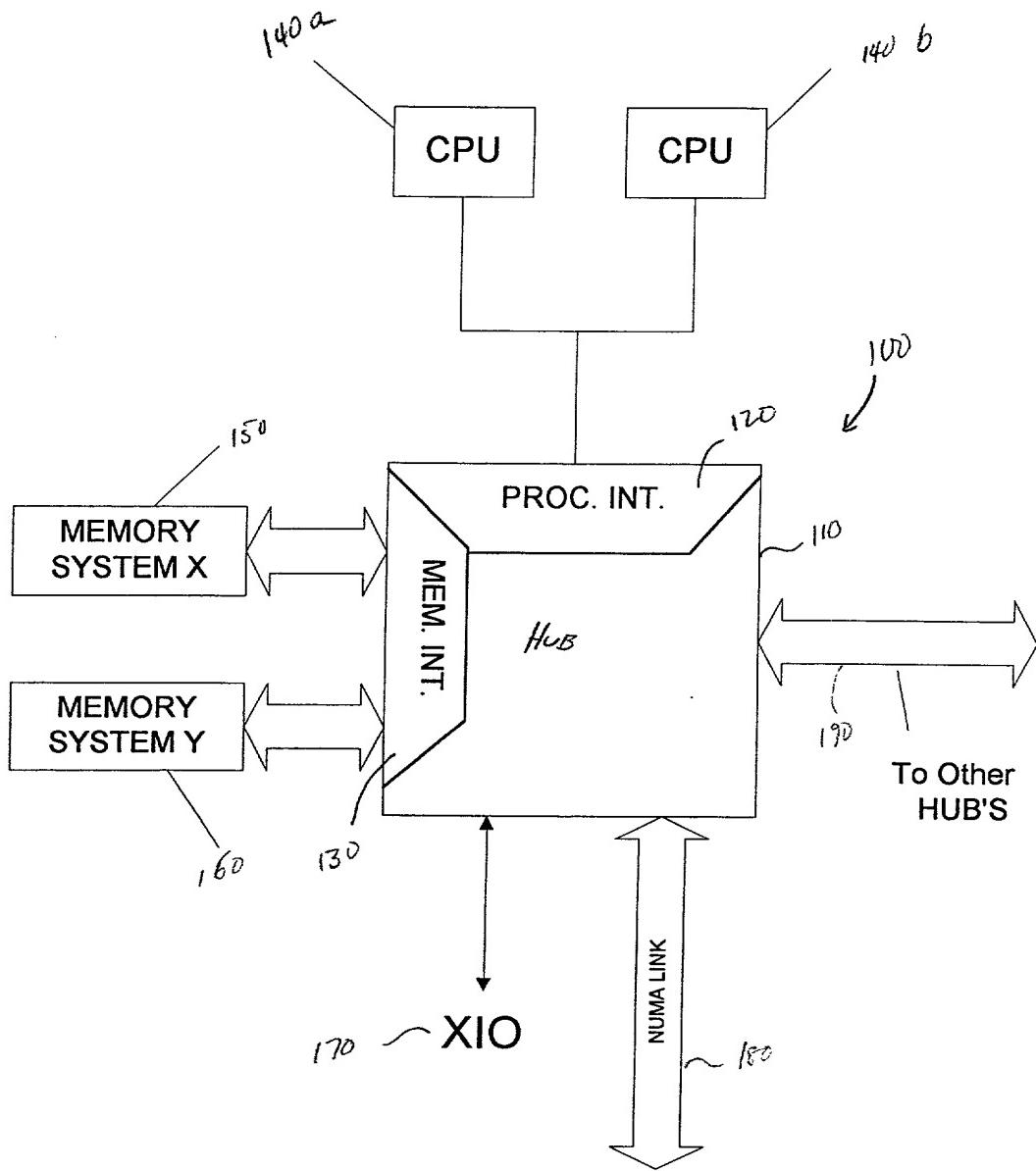


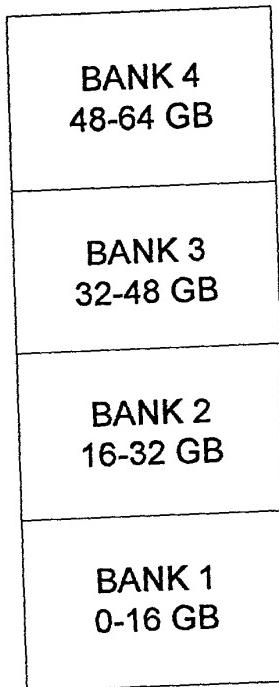
FIG. 1A



QUEUE CIRCUIT AND METHOD FOR  
MEMORY ARBITRATION EMPLOYING  
SAME

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## FIG. 1B



36 BIT MEMORY ADDRESS

BITS 35:34 - BANK SELECT  
BITS 33:0 - ADDRESS WITHIN BANK

FIG 2A

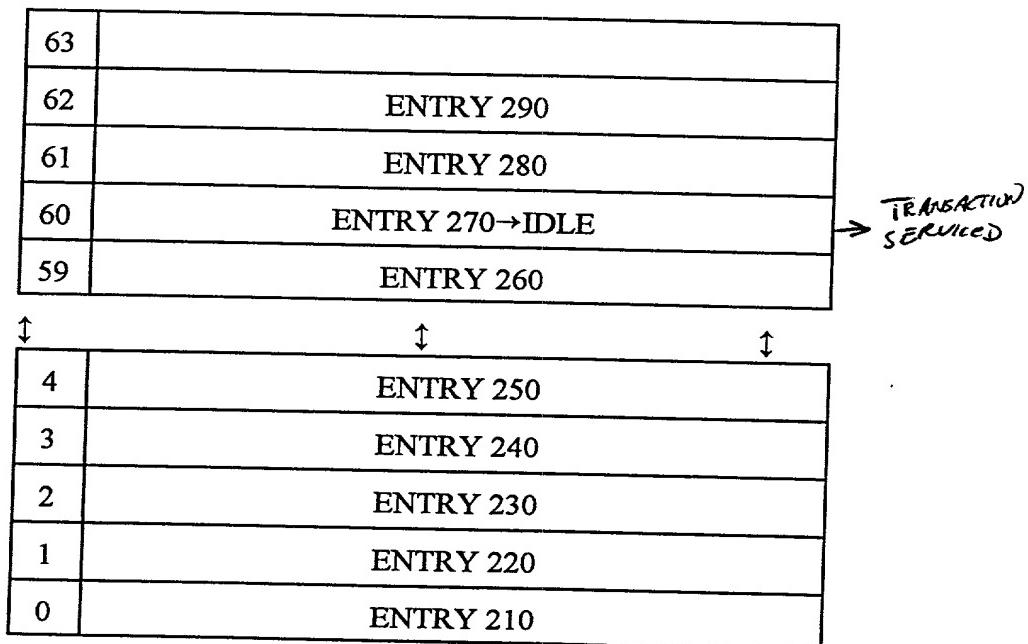
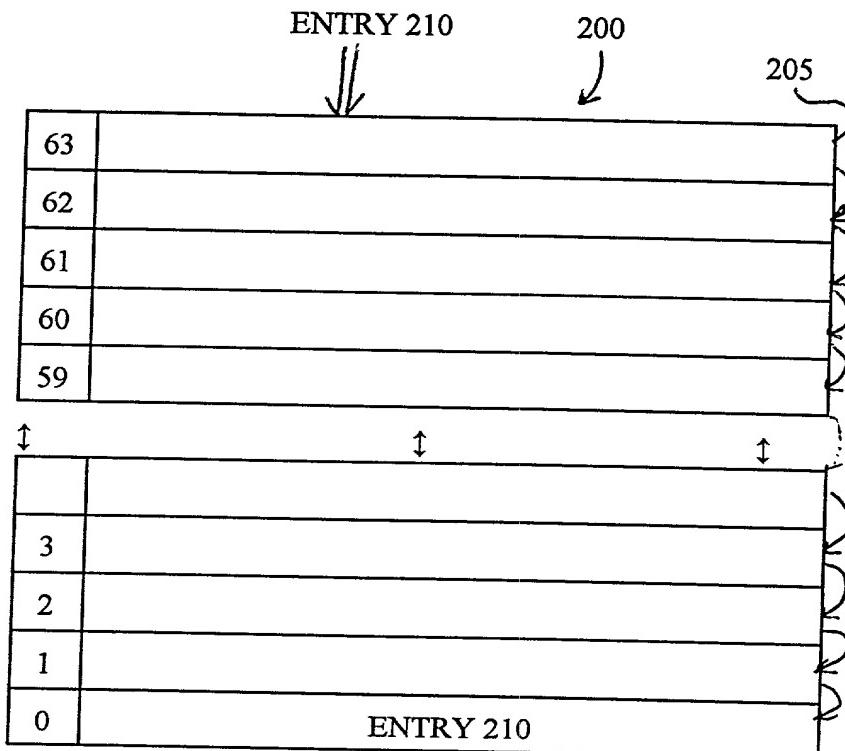


Fig. 2B

QUEUE CIRCUIT AND METHOD FOR  
MEMORY ARBITRATION EMPLOYING  
SAME

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FIG 2C

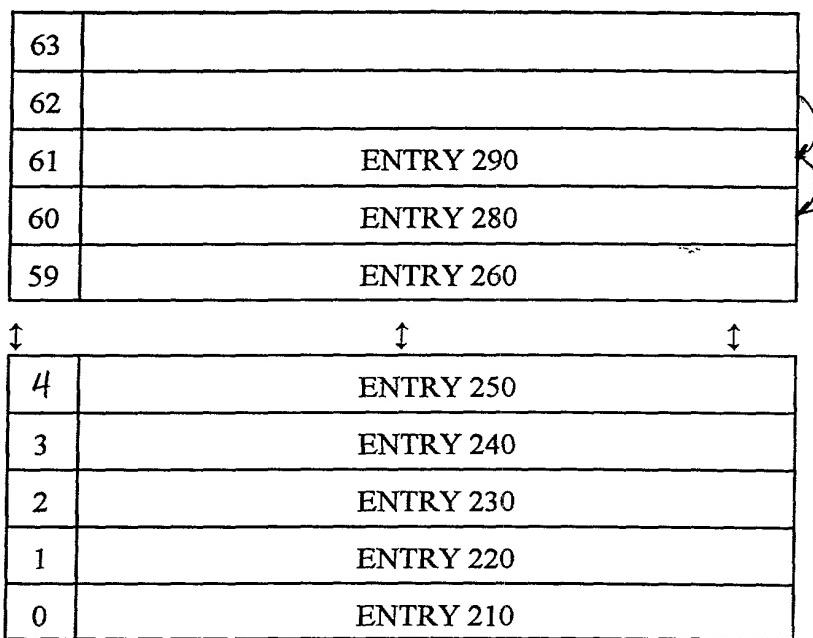


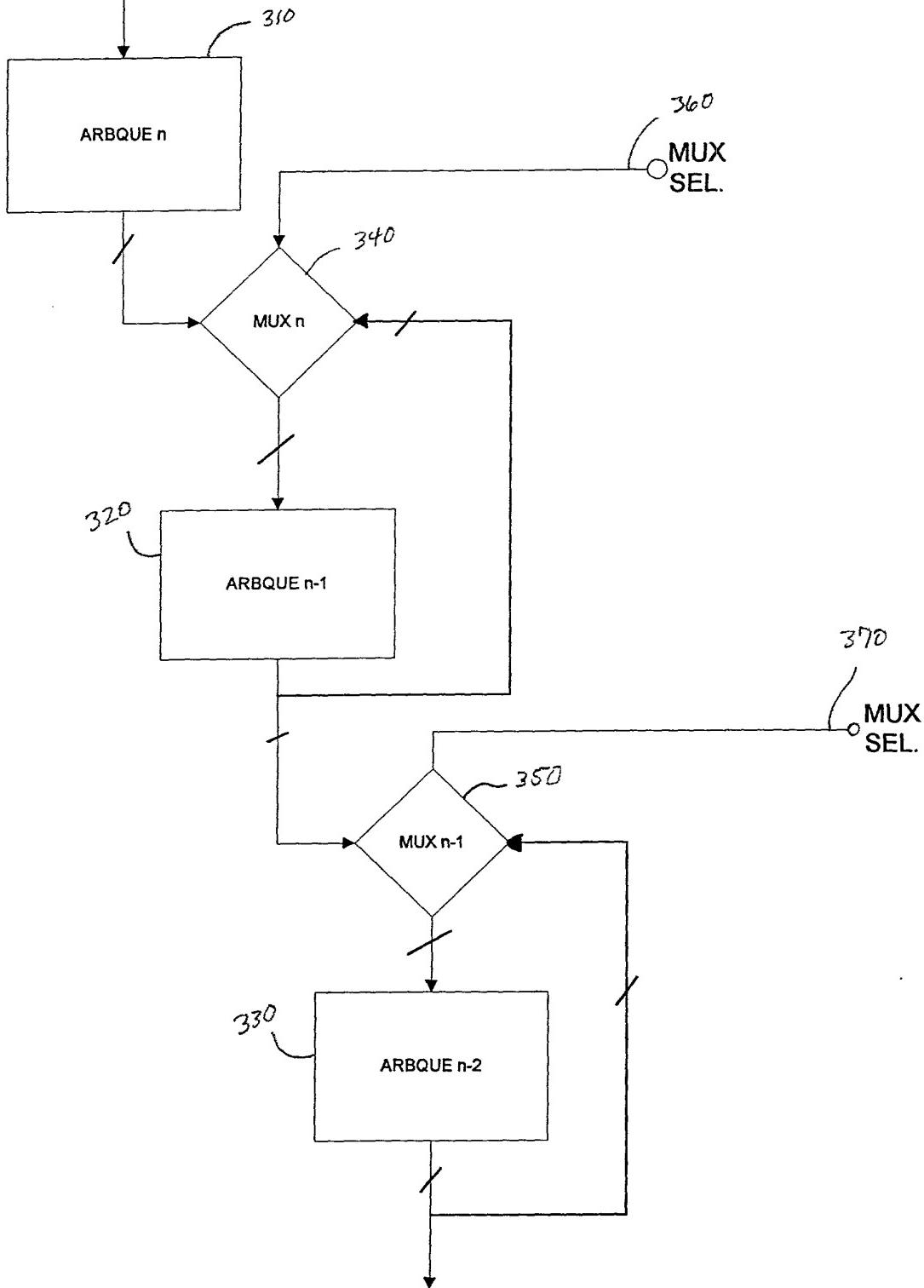
Fig 4.

STATE	R/W	CHAIN OK	BANK FREE	OP READY	TRANSACTION
460	450	440	430	420	410

QUEUE CIRCUIT AND METHOD FOR  
MEMORY ARBITRATION EMPLOYING  
SAME  
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FROM MUX (n +1)

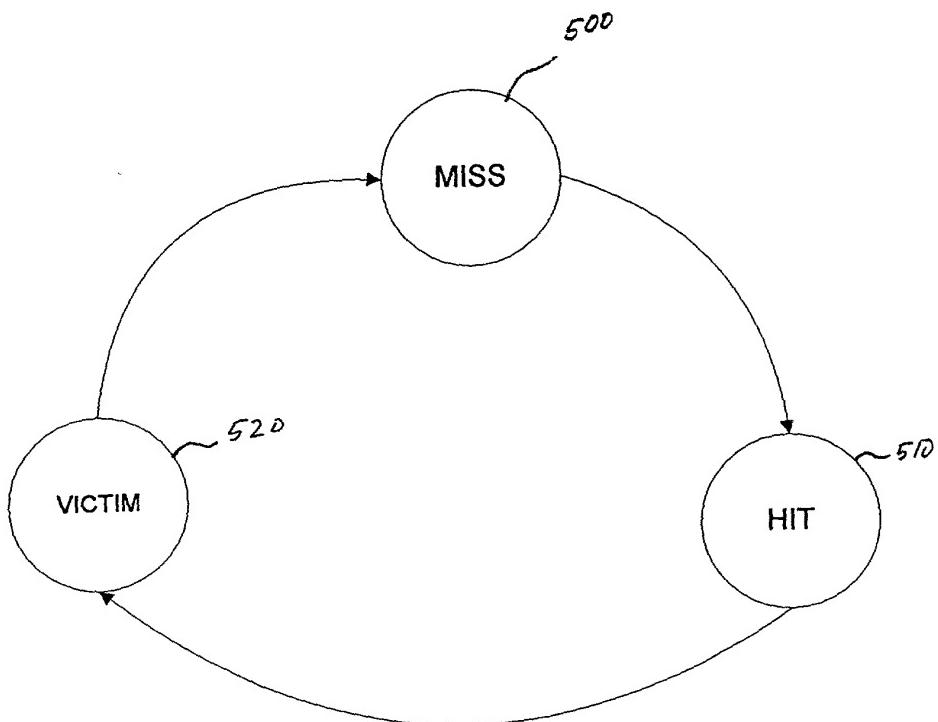
FIG. 3



QUEUE CIRCUIT AND METHOD FOR  
MEMORY ARBITRATION EMPLOYING  
SAME

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FIG 5



QUEUE CIRCUIT AND METHOD FOR  
MEMORY ARBITRATION EMPLOYING  
SAME

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FIG. 6

DRAM Direction Arbitration Policy Table

Read	Write	Urgent Write	Follows Read	Follows Write	Direction Threshold	Arbitrate For
x	0	0	x	x	x	Read
0	x	1	x	x	x	Write
0	1	0	1	0	x	Read
0	1	0	0	x	x	Write
1	1	0	x	0	x	Read
1	1	0	0	1	0	Write
1	1	0	0	1	1	Read
1	x	1	0	x	x	Write
1	x	1	1	0	0	Read
1	x	1	1	0	1	Write

QUEUE CIRCUIT AND METHOD FOR  
MEMORY ARBITRATION EMPLOYING  
SAME

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FIG 7

